



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/586,138

05/30/2007

Pierre Ansay

P71376US0

3809

136 7590 12/27/2010
JACOBSON HOLMAN PLLC
400 SEVENTH STREET N.W.
SUITE 600
WASHINGTON, DC 20004

EXAMINER

EISEMAN, ADAM JARED

ART UNIT

PAPER NUMBER

3736

MAIL DATE

DELIVERY MODE

12/27/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/586,138

Applicant(s)

ANSAY ET AL.

Examiner

ADAM J. EISEMAN

Art Unit

3736

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 15-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of species I, claims 1-14, in the reply filed on 9/30/2010 is acknowledged.

Claim Objections

2. Claims 6 and 7 objected to because of the following informalities: The claims recite "inductance" when referring the parts of the emitters, the examiner believes the term the applicant wishes to use is inductor. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-7 rejected under 35 U.S.C. 103(a) as being unpatentable over Karlheinz (attached documents DE 41 14 398 and machine translation of DE 41 14 398) in view of Gottfried (US 3,200,399).

Karlheinz discloses a distance measuring device comprising a emitter (element 2) and a receiver (element 3) where the device measures the distance between the transmitter and receiver where the transmitter is configured to produce a magnetic field by means of a resonant circuit having a resonant frequency and the receiver is configured to pick up the resonant frequency and magnetic field emitted by the emitter and convert it to strength of the magnetic field into a signal having an energy value; wherein the emitter is configured to produce the magnetic field intermittently each emission having a predetermined energy; and the receiver connected to a detector (element 6) configured to determine the distance between the transmitter and emitter.

However Karlheinz does not explicitly disclose that the first signal is correlated with a second signal that is particularly chosen to maximize accuracy.

Gottfried teaches using first emitted and received signal and a second signal and comparing them in order to determine the distance between the signal emission and reception wherein the second signal is simply the unchanged first signal (column 1, line 10 – column 2, line 14)

Regarding claims 1-7; it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Karlheinz to use a second signal that is a duplicate to first signal when it is emitted for correlation to the received signal in order to determine the distance between emitter and receiver as taught by Gottfried.

Further regarding claim 3-4; it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the second signal using well known window and time modifiers such as a Tukey window or squared synchronization.

Further regarding claim 5; it would have been obvious to one of ordinary skill in the art at the time of the invention that the coils could be cased to prevent damage to the coils.

Further regarding claim 6-7; it is well known in the skill of creating magnetic fields that inductors and capacitors are connected in series with a power source and resistor used to create the magnetic field.

6. Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karlheinz and Gottfried as applied to claims 1-7 above, and further in view of Brown (US 6,032,065).

Karlheinz as modified by Gottfried was described in the rejections above; however it does not disclose the use of the displacement sensor for use with a patient as a sleep disorder detector.

Brown teaches the use of a facial mask which is used to measure the movement of the face and mouth during sleep as a way of screening and diagnosing sleep disorders (column 2, lines 38 – column 3, line 47).

Regarding claims 8-14; Brown teaches that it is known to measure the displacement and movement of a user's face as a means for diagnosing sleep disorders. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use the Karlheinz/Gottfried displacement/movement measurement device to measure the face/mouth of a sleeping user in order to diagnose sleep disorders as taught by Brown.

Regarding claim 9-14; it would have been obvious to one of ordinary skill in the art at the time of the invention that the clinician would monitor multiple locations on the face in order to get optimal results. Furthermore, it would have been obvious to have an analyzer indicate to the user the different detected disorders that were recorded during the movements.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 4,843,259 to Weisshaupt; discloses a process for detection of eddy current induced bodies.

US 4,665,361 to Dorsch et al; discloses a method and apparatus for contactless determination of the relative positions of two bodies.

US 6,656,135 to Zogbi et al; discloses passive and wireless displacement measuring device.

US 6,879,921 to Bogel et al; discloses a device for measuring distances

US 2005/0104577 to Matei et al; discloses a system for determining relative distance and/or angles between at least two points.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADAM J. EISEMAN whose telephone number is (571)270-3818. The examiner can normally be reached on Monday-Friday 9:00 AM-5:00 PM.

Art Unit: 3736

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571)272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AE

12/18/2010

/A. J. E./

Examiner, Art Unit 3736

/Max Hindenburg/

Supervisory Patent Examiner, Art Unit 3736